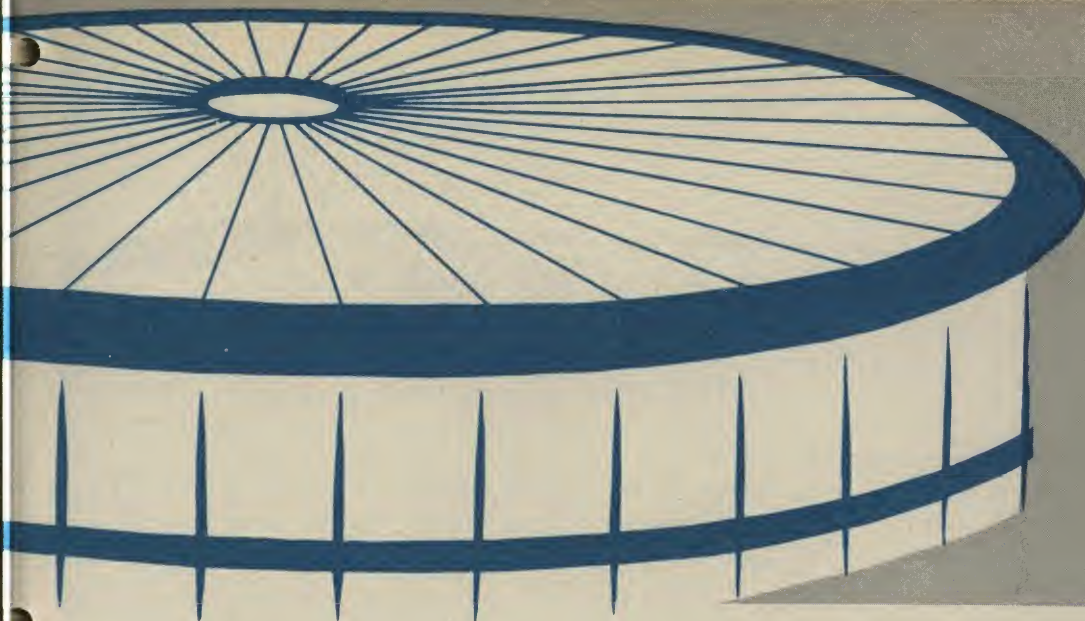




UNITED STATES PAVILION
BRUSSELS WORLD'S FAIR



KALWALL

Translucent

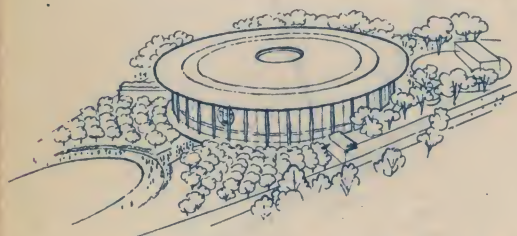
ROOFS · SKYLIGHTS



KALWALL CORPORATION
Manchester, New Hampshire



pavilion of the united states 1958 world's fair-brussels, belgium, edward d. stone, architect



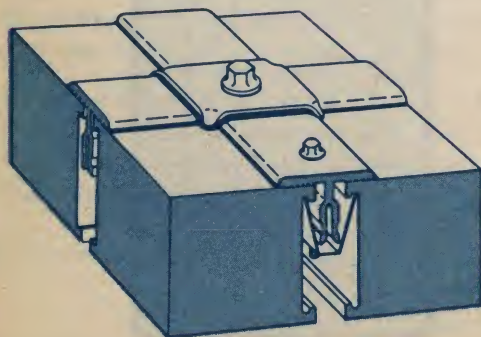
A KALWALL TRANSLUCENT ROOF

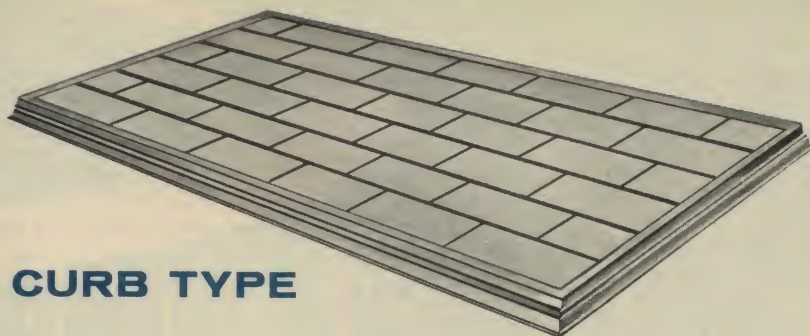
Soft, diffused, natural lighting through a translucent roof can now be achieved due to the unique features that Kalwall Panels offer.

One of the most notable qualities of the United States Pavilion at the Brussels World's Fair is the dramatic overall lighting, in large measure made possible by the 72,000 square foot Kalwall Panel roof.

From a single panel pre-assembled skylight unit to a large multi-panel roof, the versatility of Kalwall Panels can solve your design problems. The structural ability of Kalwall Panels enables them to span up to 12 feet depending on your anticipated roof load, with a resultant saving in structural members. Their light weight (1.42 lbs. for 1-9/16" thickness to 1.60 lbs. for 2-3/4" thickness per sq. ft.) and the large sizes (up to 4' x 20') permits rapid installation. Kalwall's joint system, proven in numerous roof installations, provides positive weather-tight closure. The excellent insulation value reduces heating and air conditioning requirements.

panel joint system

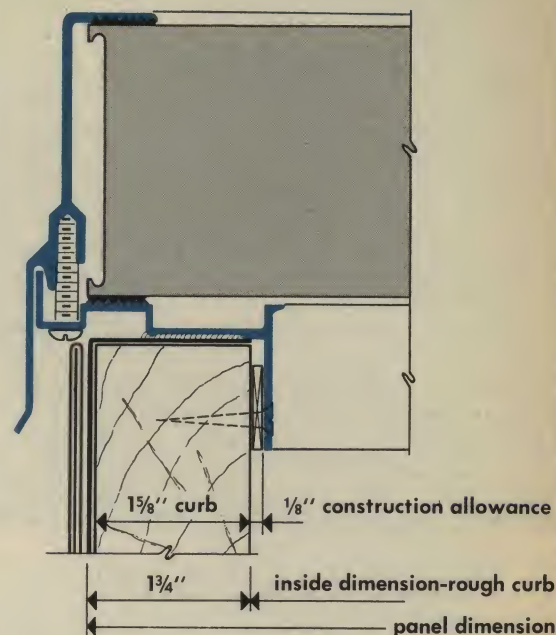




CURB TYPE

Kalwall Skylights are factory assembled units. Kalwall Translucent Panels are sealed into mitered and welded aluminum skylight frames. They are available in 1-9/16" and 2-3/4" thickness. The curb model skylight is installed by mounting the unit on a prepared curb and fastening from the inside of building. The low silhouette model is placed over the roof opening and flashed using standard roofing methods. The light weight of these units allows two men to install the largest Kalwall skylights with ease. Both pre-assembled models are available in sizes limited only by the practicality of shipping into your area. Low silhouette skylights should be used with adequate pitch.

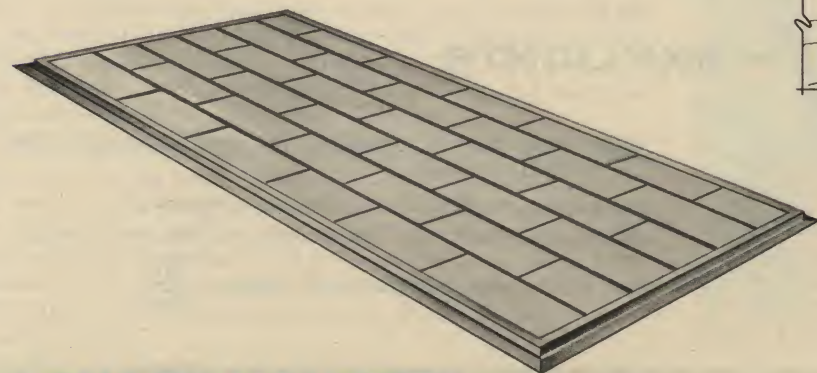
The ability to diffuse even direct sunlight to a soft, glare free illumination over a broad area is one of the outstanding characteristics of Kalwall Skylights. Infra-red rays are more uniformly distributed, eliminating "hot-spots" so common to most other types of skylighting. Maintenance is no problem. A Kalwall Skylight is self-cleaning; no streaks or spots are visible from the interior. A wide range of colors is available. Light transmission may be varied to fulfill your design requirements.



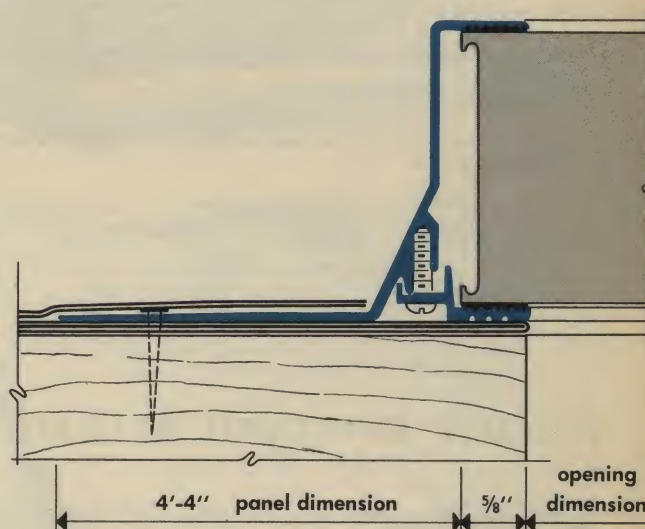
CURB TYPE half size

standard panel	inside dimensions
4'-0" x 8'-0"	3'-8 1/2" x 7'-8 1/2"
4'-0" x 10'-0"	3'-8 1/2" x 9'-8 1/2"
4'-0" x 12'-0"	3'-8 1/2" x 11'-8 1/2"
4'-0" x 20'-0"	3'-8 1/2" x 19'-8 1/2"

Other sizes available.



LOW SILHOUETTE



LOW SILHOUETTE half size

standard panel	opening size
4'-0" x 8'-0"	3'-10 3/4" x 7'-10 3/4"
4'-0" x 10'-0"	3'-10 3/4" x 9'-10 3/4"
4'-0" x 12'-0"	3'-10 3/4" x 11'-10 3/4"
4'-0" x 20'-0"	3'-10 3/4" x 19'-10 3/4"

Other sizes available.

TEST DATA

Tests for this brochure were conducted by both Kalwall Corporation and by an independent source. All these tests are available upon request.
SOUND TRANSMISSION: Average loss of 29 to 32 decibels in the normal range of frequencies.

IMPACT TEST: No break in face at 90 ft. lbs. impact.

COEFFICIENT OF EXPANSION: 1.24×10^{-5} in./in./°F. About $\frac{1}{8}$ " in 10' for a change of 100°F.

LIGHT TRANSMISSION: Varies from 5-65% depending on specifications.

FLAME TEST: Specimen subjected to a flame of 2000°F. impinging on lower face. Hole did not burn through surface after 30 minutes. After 60 minutes a hole burned through lower surface and temperature of upper surface was 325°F.

HEAT TRANSMISSION FACTOR: The overall coefficient "U" was found to average 0.40 Btu/hr. -ft²-°F.



TECHNICAL DATA

PANEL CORE

The core is of aluminum I-beam grids mechanically interlocked forming a pattern 8" wide by 20" long for the translucent panels. This size can be varied upon special quotation.

BONDING

A synthetic resin especially formulated for Kalwall to meet the rigors of external use, bonds the fiberglass faces to the aluminum grid cores. Tests show the bond actually gains strength with aging.

PANEL FACING

The face material is a fiberglass reinforced polyester resin sheet with special surfacing produced to rigid Kalwall specifications for color, thickness and strength. It is stronger than metal of equal weight and highly resistant to shattering, crazing, fading, sharp blows, and vibrations.

COLORS

Sunlight filtering colors can be used in the South and West where sun rays are more intense.

White	Green	} Light & Dark
Crystal	Blue	
Sand	Yellow	
	Red	

ALUMINUM FRAME

The mitered and heli-arc welded frame is fabricated of extruded 6063-T5 aluminum, and is completely assembled and sealed to the panel at the factory.

FEATURES

Translucent—Kalwall diffuses light so efficiently that even direct sunlight can be converted to even glare-free illumination.

Low Cost—Installation is rapid due to light weight and giant size. Minimum on-the-site labor.

Shatterproof—The fiberglass reinforced polyester faces welded to the aluminum I-beam grid account for its shatterproof qualities.

Versatile—Adaptable to all types of construction, which makes installation simple.

Insulation—Kalwall has a good insulation value as shown by the average low "U" factor of 0.40.

Lightweight—Kalwall skylights weigh only 2.2 lbs. per sq. ft.

Aesthetic—Kalwall translucent colors, combined with shadow lines from internal grids, create a unique ever-changing textural effect unduplicated by any other building material.

Low Maintenance—Kalwall's durable nonporous surface resists the elements, acids, alkalis and common solvents.

Modular Units—The large structural standard units answer modular demands of modern building.

Structural—Kalwall is unusually strong and rigid in relation to its weight due to the unique sandwich construction.

SHORT SPECIFICATIONS — SKYLIGHTS

Kalwall Skylights shall be manufactured by Kalwall Corporation, 43 Union Street, Manchester, N. H. Panels shall consist of a patented locked aluminum I-beam core grid (8" x 20"), and reinforced 1/16" translucent faces are to be welded with waterproof bond under heat and pressure process at the factory under controlled conditions. Color of bond to be black. The panel shall be factory assembled and

sealed to a separate mitered and welded frame fabricated of extruded aluminum.

Note: Long specifications available on request.

KALWALL PANELS also available for curtain wall construction.

Please see our curtain wall insertion $\frac{3e}{Ka}$

KALWALL CORPORATION
43 Union Street
Manchester, New Hampshire

All data in this brochure is correct to the best of our knowledge. However, no warranty is expressed or implied.

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